

System Requirements and Performance (Dollars are in millions except as noted.)		
Northeast Corridor	New HSR	Maglev
<b><i>Physical, production, and traffic factors (traffic data is for the year 2020)</i></b>		
Route-miles	441	441
Trip-time, hours, New York-Boston	1.7	1.1
Average train speed (mph)	110	163
Average fare per passenger-mile (dollars)	0.332	0.379
Trains per day in each direction	181	166
Passengers, Millions of Trips (2020)	24.8	25.8
Passenger-Miles, Millions (2020)	4,773	5,094
Average trip length (miles)	193	198
Average trip length as % of route length	44%	45%
HSGT traffic density per route-mile (millions of passenger-miles per route-mile)	10.8	11.5
Percent of air traffic diverted	27.0%	35.2%
Percent of intercity auto traffic diverted	0.7%	0.7%
Percent of HSGT traffic by source:		
Diverted from air	22%	27%
Diverted from auto	2%	2%
Diverted from conventional rail	70%	66%
Diverted from bus	0%	0%
Induced	5%	5%
<b><i>Operating efficiency factors, 2020</i></b>		
Train-miles, millions	39.4	36.7
Passenger-miles per train mile	121	139
Seat-miles, millions	11,203	11,932
Load factor	43%	43%
Gross ton-miles, millions	15,463	6,609
Passenger-miles per gross ton-mile	0.31	0.77
Train-hours, millions	0.36	0.23
Passenger-miles per train hour	13,306	22,612
Operating ratio	34%	26%
<b><i>Operating results for 2020</i></b>		
Revenues:		
Passenger transportation revenue	\$1,587	\$1,931
Income from ancillary activities	\$43	\$45
System revenues	\$1,630	\$1,976
<i>Percent of system revenues from ancillary activities</i>	3%	2%
Operating and maintenance expenses:		
Maintenance of way	\$43	\$33
Maintenance of equipment	\$88	\$53
Transportation	\$138	\$154
Passenger traffic and services	\$156	\$160
General and administrative	\$114	\$95
Total O&M expense	\$540	\$494
<i>Per passenger-mile (dollars):</i>		
Maintenance of way	\$0.009	\$0.006
Maintenance of equipment	\$0.018	\$0.010
Transportation	\$0.029	\$0.030
Passenger traffic and services	\$0.033	\$0.031
General and administrative	\$0.024	\$0.019
Total O&M expense	\$0.113	\$0.097
Operating surplus	\$1,090	\$1,482
<i>Operating surplus per passenger-mile (dollars)</i>	\$0.228	\$0.291
Year showing first operating surplus	Year 2000	Year 2000

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<b><i>Life-Cycle Measures</i></b> (All amounts are present values, as of the year 2000, of cash inflows/outflows between 2000 and 2040. )		
Revenues:		
Passenger Transportation Revenues	\$13,089	\$15,917
Income from Ancillary Activities	\$353	\$367
System Revenues	\$13,442	\$16,285
Less: Total O&M expenses	\$4,687	\$4,328
Operating surplus	\$8,755	\$11,956
Less: Continuing investments	\$478	\$349
Surplus after continuing investments	\$8,277	\$11,607
Initial investment:		
Initial vehicle investment	\$1,826	\$1,541
Initial infrastructure investment	\$17,232	\$20,524
Initial investment for ancillary activities	\$70	\$73
Initial investment, Total	\$19,127	\$22,137
<i>Percent of total initial investment pertaining to--</i>		
<i>Vehicles</i>	10%	7%
<i>Infrastructure</i>	90%	93%
<i>Ancillary activities</i>	0%	0%
<i>Total initial investment per route-mile</i>	\$43.4	\$50.2
Portion of initial investment that is <u>not</u> covered by surplus after continuing investments	\$10,851	\$10,530
Percentage of initial investment covered by surplus after continuing investments	43%	52%
<b>Comparison of Benefits and Costs; Assessment of Partnership Potential</b>		
<b>Surplus after continuing investments</b>	<b>\$8,277</b>	<b>\$11,607</b>
Total benefits:		
Benefits to HSGT users:		
System revenues	\$13,442	\$16,285
Users' consumer surplus	\$7,861	\$8,538
Total benefits to HSGT users	\$21,303	\$24,823
Benefits to the public at large:		
Airport congestion delay savings		
Operation delays	\$1,055	\$1,256
Passenger delays	\$1,792	\$2,133
Total airport congestion delay savings	\$2,847	\$3,389
Highway delay savings	\$639	\$634
Emission savings	\$152	\$98
Total benefits to the public at large	\$3,638	\$4,121
<b>Total benefits</b>	<b>\$24,941</b>	<b>\$28,943</b>
Total costs:		
Initial investment	\$19,127	\$22,137
O&M expense	\$4,687	\$4,328
Continuing investments	\$478	\$349
<b>Total costs</b>	<b>\$24,293</b>	<b>\$26,815</b>
Incidence of total costs:		
Costs borne by users	\$13,442	\$16,285
Publicly-borne costs	\$10,851	\$10,530

<b>Northeast Corridor</b>	<b>New HSR</b>	<b>Maglev</b>
<b>Total benefits less total costs</b>	<b>\$648</b>	<b>\$2,128</b>
Benefits to HSGT users less costs borne by users	\$7,861	\$8,538
Benefits to the public at large less publicly-borne costs	(\$7,213)	(\$6,410)
<b>Ratio of total benefits to total costs</b>	<b>1.03</b>	<b>1.08</b>
Ratio of benefits to HSGT users, to costs borne by users	1.58	1.52
Ratio of benefits to the public at large, to publicly-borne costs	0.34	0.39
<b>Does this case meet the threshold tests for "partnership potential"?</b>	YES	YES